1 has also been amended in line 2 by inserting "carburetor" before the term "body" to clearly provide a proper antecedent basis for the phrase "carburetor body".

These amendments are believed to place each of claims 1-12 in a proper condition for allowance and such action is requested.

Claim 13

Claim 13 was allowed.

Claims 14-22

The indication that claims 14-22 would be allowable if amended to obviate the rejection under §112 that independent claim 14 contains subject matter not described in the specification in a way likely to convey that when the application was filed applicant was in possession of the invention as now claimed.

While for the reasons stated below applicant disagrees with this contention, claim 14 has been amended to obviate this rejection by deleting the reference to the throttle shaft being axially movable relative to the mixing passage in the carburetor body. Accordingly, as amended, claim 14 and each of claims 15-22 dependent thereon is believed to obviate this rejection and now be in a proper form for allowance and such action is requested.

Contrary to the contention in the Office Action, based on the original drawings and written description, skilled persons would understand that the throttle shaft 16 is axially movable relative to the mixing passage 18 and carburetor body 30 because the shaft 16 is disclosed as being cylindrical and the same diameter throughout, extending

through and received for rotation in a bore 28 through the carburetor body 30 and retained in the body by a split ring 32 received in a groove 34 in the shaft 16 (Page 6, Lines 9-15). To assemble the shaft 16 through the bore 28 the shaft must be axially movable relative to the carburetor body 30. As shown in Figures 1 and 3, both ends of the shaft 16 project beyond the carburetor body 30 and in assembly the plate 54 of the cam body 20 is spaced from the carburetor body. Consequently the shaft 16 is axially movable relative to the carburetor body 30. The slot 48 is explicitly disclosed as preferably being longer than the width of both the valve head 14 and the mixing passage 18 to permit movement thereof to center the valve head 16 in the mixing passage 18. Therefore, skilled persons would readily recognize and appreciate that the shaft 16 is inherently moveable axially relative to both the carburetor body 30 and the valve head 16. Since this is all that is required to comply with §112 reconsideration and withdrawal of this rejection is requested.

Claim 23

Reconsideration and withdrawal of the rejection of claim 23 for lack of novelty under §102(e) in view of the Pattullo reference is requested for the following reasons. Contrary to the contention in the Office Action, Pattullo does not disclose, suggest or teach either the specific concept of a valve head in a carburetor being movable or shiftable axially relative to its actuator shaft and transversely relative to the mixing passage to center the valve head in the mixing passage, any construction and arrangement for doing so, nor applicant's specific construction and arrangement as defined by amended claim 23.

Indeed, Pattullo teaches away from applicant's concept and construction as defined by amended claim 23 because it explicitly discloses that its choke plate 62 is received in the slot 72 in the actuator shaft 56 "with an interference fit" (column 9, line 33-34). Furthermore "two dimples 74,74' insure an interference fit of the plate 62 within slot 72" (column 9, line 37-38). The valve plate 62 is further retained in fixed position on the shaft 56 by abutment of the detents 76, 78, 80 in the choke plate 62 with the edges of the slot 72 on opposite sides of the shaft 56 (column 9, lines 58-63). Thus, the choke plate 62 does not move relative to its shaft 56.

Applicant disagrees with the contention in the Office Action that the drawings of Pattullo disclose that the length of the slot 72 in the choke shaft 56 exceeds the diameter of the valve plate 62. Contrary to the contention in the Office Action, Figures 15-30 of Pattullo are <u>not</u> drawn to engineering scale. Rather, Pattullo explicitly states in column 9, lines 3-5 only that Figures 21-30 are drawn to engineering scale. Figures 21-30 show the construction of only the choke shaft 56 and choke lever part 54 with the lever 54 integrally joined or molded as one piece with the choke shaft 56. These Figures 21-30 do not show the valve plate 62 at all, consequently a skilled person cannot make any comparison between the length of the slot 72 and the diameter of the valve plate 62. Indeed, from a comparison of Figures 14 and 18 which do illustrate the valve plate 62 it is self evident that these Figures 14 and 18 are not to the same scale. Indeed, in Figure 18 the diameter of the valve plate 62 is significantly greater than the length of the slot 72 in the shaft 56 shown in Figure 14. Furthermore, in Figure 14 the diameter of the choke plate 62 is exactly the same as the length of the slot 72 of the shaft 52 and both are equal to the diameter of the mixing passage 70 of the carburetor body 64.

Consequently, neither the written description nor the drawings of Pattullo disclose, suggest or teach to persons of ordinary skill either the basic concept, specific construction and arrangement of applicant's invention as defined by claim 23 nor its significant practical advantages. Accordingly, claim 23 defines both novel and patentable subject matter over the Pattullo reference for at least these reasons.

Claim 24

Since claim 24 is directly dependent on claim 23 it defines patentable subject matter for at least the foregoing reasons as well as the reasons for which it was deemed to be allowable if rewritten to obviate the §112 rejection with respect to the valve shaft being axially movable relative to the carburetor body which has been obviated by the amendment of claim 23.

Accordingly, reconsideration and allowance of claim 24 as amended is respectfully requested. If, after considering this response, claim 23 is not allowed then applicant reserves the right to place claim 24 in independent form.

Conclusion

For the foregoing reasons as amended each of the claims 1-12 and 14-24 are believed to comply with §112 and claim 23 is believed to define novel and patentable subject matter over Pattullo. Thus reconsideration and allowance of these claims as amended is respectfully requested.

If, after considering this Response, the Examiner is of the view that any of claims 1-24 is not in a condition for allowance, a telephone interview is requested with

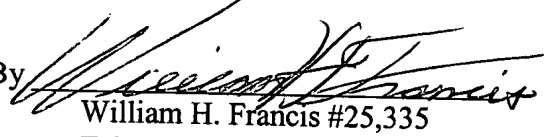
applicant's undersigned attorney, William Francis, so that immediate consideration can be given to any further amendments suggested by the Examiner or otherwise needed to place all the claims in a condition for allowance. The Examiner is asked to initiate this telephone interview by calling William Francis at (248) 689-3500 any workday Monday through Friday between 9:00 A.M. and 5:00 P.M.

A Marked-Up Copy showing the amendments made to claims 1, 14 and 23 is enclosed.

Respectfully submitted,

Reising, Ethington, Barnes, Kisselle
Learman & McCulloch, P.C.

WHF:sal

By 

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478SC [2630.3059.001]

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: PAUL J. DOW

Ser. No. 09/702,470

Filed: October 31, 2000

For: Carburetor Valve Assembly

Examiner: Richard L. Chiesa

Group Art: 1724

In reply to: Examiner's Letter of November 20, 2002

Certificate of Mailing

Date of Deposit with U.S. Postal Service February 13, 2003 **. I hereby certify that this paper is being deposited with the United States Postal Service as first class mail under 37 CFR 1.8 on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.**

Suzanne J. Wills

Suzanne J. Wills

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

MARKED-UP COPY SHOWING CHANGES
MADE IN RESPONSE TO THE OFFICE ACTION

This is in response to the Office Action of November 20, 2002 which withdrew the Notice of Allowance and reopened prosecution on the merits with respect to claims 1-12 and 14-24.

In response to this Office Action, please amend this application as follows:

IN THE CLAIMS

Please AMEND each of claims 1, 14 and 23 as follows:

1. (Twice Amended)

A carburetor, comprising:

a metallic **carburetor** body having a fuel and air mixing passage through which a fuel and air mixture is delivered to an engine;

a throttle valve assembly movable in the fuel and air mixing passage between idle and wide open positions, said valve assembly having a polymeric shaft rotatable relative to the carburetor body;

a separate polymeric cam body connected to the shaft for rotation in unison with the shaft;

a separate valve head in communication with the fuel and air mixing passage and carried by the shaft for rotation in unison with the shaft**[,]** **;**

the shaft being journalled for rotation in integral bores in one portion of the carburetor body;

the cam body being configured to be connected to an actuator wire for movement of the shaft and valve head between the idle and wide open positions; and

at least one stop carried by the **carburetor** body and engageable by the cam **body** to limit rotation of the valve assembly to at least one of the idle position and wide open throttle position**[s]** of the valve head of the valve assembly.

14. (Twice Amended)

A throttle valve assembly for a carburetor comprising:

a carburetor body with a fuel an air mixing passage;

a throttle polymeric shaft rotatably carried by the carburetor body in communication with the fuel and air mixing passage and having a slot formed therethrough between its ends**[, the shaft also being axially movable relative to the mixing passage and the carburetor body]**;

a throttle cam body connected to the shaft for co-rotation in unison with the shaft to engage at least one stop carried by the carburetor body to limit rotation of the throttle valve assembly;

a valve head carried by the shaft for rotation in unison with the shaft, in communication with the fuel and air mixing passage and disposed in part in the slot so that rotation of the shaft changes orientation of the valve head relative to the fuel and air mixing passage to control fluid flow through the fuel and air mixing passage; and

the length of the slot through the shaft being greater than the width of the portion of the valve head received in the slot of the shaft and greater than the width of the mixing passage at the location of the shaft in the mixing passage so that the **[shaft]** **valve head** is movable axially relative to [both the **valve head]** **the shaft** and **transversely relative to** the mixing passage to center the valve head in the mixing passage.

23. (First Amended)

A valve assembly comprising:

a carburetor body with a mixing passage, and a pair of coaxial bores on opposite sides of the mixing passage and extending substantially transversely to the longitudinal axis of the mixing passage;

a polymeric valve shaft extending transversely through the mixing passage, journalled for rotation in the bores, **[being axially movable relative to the mixing passage and the carburetor body]** and having a slot therethrough between its ends;

a valve head received in the mixing passage, disposed in the slot and carried by the shaft for rotation in unison with the shaft so that rotation of the shaft changes the orientation of the valve head relative to the mixing passage to control fluid flow through the mixing passage; and

the length of the slot through the shaft being greater than the width of the portion of the valve head disposed in the slot of the shaft and greater than the width of the mixing passage at the location of the shaft in the mixing passage so that the **[shaft]** **valve head** is movable axially relative to [both the **valve head]** **the shaft** and **transversely relative to** the mixing passage to center the valve head in the mixing passage.

Respectfully submitted,

Reising, Ethington, Barnes, Kisselle
Learman & McCulloch, P.C.

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